

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES



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Denris F. Armijo, Registration No. 34,116

In the Application of

John S. Cunningham, et al.,

Serial Number:

09/460,197

Filed:

December 13, 1999

For:

Multiple and Hybrid Graphics Display Types

Examiner:

Kevin M. Nguyen

Art Unit:

2674

Attorney Docket Number:

A65-25311

Express Mail Label Number:

EQ 424982437 US

#### APPELLANT'S SECOND AMENDED SECOND SUPPLEMENTAL APPEAL BRIEF

To:

Mail Stop Appeal Brief-Patents

Commissioner of Patents

PO Box 1450

Alexandria, VA 22313-1450

Honorable Assistant Commissioner for Patents:

In response to the Second Notification of Non-Compliance of May 8, 2006, and as provided in 37 C.F.R. § 1.193, Appellant provides its Second Amended Second Supplemental Appeal Brief in triplicate in connection with the above-identified

application with the Board of Patent Appeals and Interferences ("Board"). After Applicants' Appeal Brief was timely filed, a non-final office action was sent by the office on January 14, 2004. The Applicants filed a timely reinstatement of the appeal with a Supplemental Brief on April 13, 2004. For a second time, the prosecution was reopened and another new reference was cited in a non-final office action dated December 16, 2004. A Supplemental Brief was filed March 8, 2005. Not receiving any response, the Applicants were forced to file a Petition to Compel to file a brief on September 16, 2005, which was granted on October 7, 2005. On February 3, 2006, an office action was issued, whereby the Examiner indicated that the Supplemental Brief did not comply with the appeal brief requirements. A Supplemental Appeal Brief was filed by the Applicants in conjunction with their second Reinstatement of the Appeal, discussing the old and new references and arguments raised by the Examiner in all of the office actions. A second notification of non-compliant Appeal Brief was issued on May 8, 2006, citing totally different grounds of non-compliance. It is Applicants' contention that the new prior art does not raise any new issues, thus, the only matters that need supplementation are the same issues in the first and second appeal briefs, but with the addition of the newly raised prior art. There are no new amendments, affidavits or other evidence submitted with this brief. It is Applicants' contention that the present notification of noncompliance was erroneously entered, but in order to finally get this long-standing appeal heard, further supplementation is being provided. This being a Supplemental brief, it is Applicants' belief that a fee for the brief is not due. The Supplemental brief was due on June 8, 2006, thus a one month extension is due and the Commissioner is authorized to charge the extension fee to Deposit Account No. 01-1125. If other fees are required, the Commissioner is authorized to charge any fees or credit any overpayment under 37 CFR §§ 1.16 and 1.17, which may be required during the pendency of this application to Deposit Account No. 01-1125.

## (1) Real Party in Interest

The real party in interest is Honeywell International, Inc.

## (2) Related Appeals and Interferences

No other appeals or interferences will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

## (3) Status of Claims

Claims 33-36, 38-46 and 48-52 are pending in the present application and have been finally rejected, and are the basis for this appeal. The appealed claims are attached as appendix A. Claims 1-32 were withdrawn by the Examiner pursuant to a restriction requirement in Paper 5. Claims 37 and 47 were canceled in Applicants' amendment and response to the office action, filed on August 28, 2002. The above statement clearly indicates that the appealed claims are 33-36, 38-46 and 48-52, claims 1-32 were withdrawn and claims 37 and 47 were canceled. To further clarify this, the following is a listing of the claims:

Claim 1 withdrawn

Claim 2 withdrawn

Claim 3 withdrawn

Claim 4 withdrawn

Claim 5 withdrawn

Claim 6 withdrawn

Claim 7 withdrawn

Claim 8 withdrawn

Claim 9 withdrawn

Claim 10 withdrawn

Claim 11 withdrawn

Claim 12 withdrawn

Claim 13 withdrawn

Claim 14 withdrawn

Claim 15 withdrawn

Claim 16 withdrawn

Claim 17 withdrawn

Claim 18 withdrawn

Claim 19 withdrawn

Claim 20 withdrawn

Claim 21 withdrawn

Claim 22 withdrawn

Claim 23 withdrawn

Claim 24 withdrawn

Claim 25 withdrawn

Claim 26 withdrawn

Claim 27 withdrawn

Claim 28 withdrawn

Claim 29 withdrawn

Claim 30 withdrawn

Claim 31 withdrawn

Claim 32 withdrawn

Claim 33 rejected and appealed

Claim 34 rejected and appealed

Claim 35 rejected and appealed

Claim 36 rejected and appealed

Claim 37 canceled

Claim 38 rejected and appealed

Claim 39 rejected and appealed

Claim 40 rejected and appealed

Claim 41 rejected and appealed

Claim 42 rejected and appealed

Claim 43 rejected and appealed

Claim 44 rejected and appealed

Claim 45 rejected and appealed

Claim 46 rejected and appealed

Claim 47 canceled

Claim 48 rejected and appealed

Claim 49 rejected and appealed

Claim 50 rejected and appealed

Claim 51 rejected and appealed

Claim 52 rejected and appealed

## (4) Status of Amendments

All of the amendments propounded by the Applicants have been entered including the amendment after final.

#### (5) Summary of the Invention

The invention, as presently claimed, is a method and apparatus for driving multiple displays of different types, specifically raster displays, stroke displays and hybrid displays (a combination of stroke and raster displays), using a single display routine, and to dynamically switch between displays in real time. The invention dynamically switches the information to be displayed between the selected displays.

Claims 33, 38, 43 and 48 are the independent claims for this appeal. The claims are set forth and are supported by the cited page numbers and drawings as indicated in parentheses.

33. A computer device (pg. 8, line 4) for driving multiple displays of different types (pg.8, line 5) using formats designed for raster displays (pg. 3, line 22), said device comprising:

means for linking generated code from said formats to a standard graphics library (pg. 3, line 24 through pg. 4, line 1, Figs. 4 and 5);

means for driving a plurality of displays of different types with a single display routine (pg. 8, lines 12-14, pg. 13, lines 14-16), said plurality of displays comprising stroke displays, raster displays and hybrid displays (pg. 8, lines 6-10, pg. 9, lines 2-4), wherein said hybrid displays comprise stroke and raster displays (pg. 8, line 24 through pg. 9, line 2), from output of said graphics library (pg. 10, lines 16-20) (Figs. 4 and 9); and

means for dynamically switching between said displays in real time (pg. 8, lines 6-8, lines 22-24) (Figs. 6, 10a and 10b).

38. A computer device (page 8, line 4) for driving a hybrid stroke/raster display (page 8, line5) using formats designed for raster displays (page 3, line22), said device comprising:

means for linking generated code from said formats to a standard graphics library (pg. 3, line 24 through pg. 4, line 1, Figs. 4 and 5);

driving said hybrid stroke and raster display with a single display routine (pg. 8, lines 12-14, pg. 13, lines 14-16, Figs. 4 and 9); and

means for providing stroke and raster display inputs (pg 8, lines 6-10, pg.9, lines 2-4) from output of said graphics library (pg 10, lines 16-20) (Figs 4 and 9).

43. A method for driving multiple displays of different types (page 8, line 5) using formats designed for raster displays (page 3, line22), the method comprising the steps of:

linking generated code from the formats to a standard graphics library (pg. 3, line 24 through pg. 4, line 1, Figs. 4 and 5);

driving a plurality of displays of different types with a single display routine (pg. 8, lines 12-14, pg. 13, lines 14-16), the plurality of displays comprising stroke displays, raster displays and hybrid displays (pg. 8, lines 6-10, pg. 9, lines 2-4), wherein the hybrid displays comprise stroke and raster displays (pg. 8, line 24 through pg. 9, line 2), from output of the graphics library (pg. 10, lines 16-20) (Figs. 4 and 9); and dynamically switching between the displays in real time (pg. 8, lines 6-8,

48. A method for driving a hybrid stroke/raster display (page 8, line5) using formats designed for raster displays (page 3, line22), the method comprising the steps

lines 22-24) (Figs. 6, 10a and 10b).

of:

linking generated code from the formats to a standard graphics library (pg. 3, line 24 through pg. 4, line 1, Figs. 4 and 5);

driving the hybrid stroke and raster display with a single display routine (pg. 8, lines 12-14, pg. 13, lines 14-16, Figs. 4 and 9); and

providing stroke and raster display inputs (pg 8, lines 6-10, pg.9, lines 2-4) from output of the graphics library (pg 10, lines 16-20) (Figs 4 and 9).

To assist in deciding the issues presented, a brief summary of the proceedings are hereby presented. The original patent application was filed with the Office on December 13, 1999, with 52 claims. An office action was issued on Jan. 23, 2002, containing a restriction and/or election requirement. An election was made by the

Applicants on February 5, 2002, electing claims 33-52. A non-final office action was mailed by the Office on May, 8, 2002, objecting to certain informalities and rejecting all of the pending claims based primarily on a prior art reference to Tomiyasu (US 5,138,305). On September 3, 2002, a response to the office action was timely filed by amending the claims to specifically indicate the type of displays that were not contained in the cited reference. Another office action was issued by the Office on November 27, 2002, again rejecting all of the pending claims. Another amendment was filed by the Applicants on March 19, 2003, whereby the feature of a "single display routine" was added to the claims and fully supported in the specification. A final office action was issued by the Office on May 5, 2003, indicating that Stoddard (US Pat. No. 3,665,454) contained a "single display generator" feature that the Examiner apparently deemed similar to a "single display routine". Thereafter, a response, after final, within two months of the office action, was timely filed on July 1, 2003. The Applicants argued that a single display routine was not the same or equivalent to a single display generator. The Examiner in his advisory action dated July 14, 2003, apparently came up with a new reason for rejection and stated "Stoddard, et al., teaches driving a plurality of displays of different types with communication buses or data flow paths are illustrated as single lines (see column 2, lines 42-43)" and indicated that the claims continued to be rejected. From this, the Applicants appeal. After Applicants' Appeal Brief was timely filed, a non-final office action was sent by the office on January 15, 2004. The Applicants filed a timely reinstatement of the appeal with a Supplemental Brief on April 13, 2004. For a second time, the prosecution was reopened and another new reference was cited in a non-final office action dated December 16, 2004. A Supplemental Brief was filed March 8, 2005. On February 3, 2006, an office action was issued whereby the Examiner indicated that the Supplemental Brief did not comply with the appeal brief requirements. An Amended Second Supplemental Brief was timely filed on February 23, 2006. On May 8, 2006, yet another Notification of Non-Compliant Appeal Brief was issued and this brief is provided to address the issues raised.

#### (6) Issues

Apparently, the Examiner has withdrawn several of the rejections as provided in the Notification of Non-Compliance of May 8, 2006, therefore the issues remaining are:

I

A SINGLE DISPLAY GENERATOR OR A COMMUNICATION BUS OR DATA FLOW
PATH ILLUSTRATED AS SINGLE LINES IS NOT SIMILAR OR EQUIVALENT TO
THE CLAIMED FEATURE OF A SINGLE DISPLAY ROUTINE

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THE EXAMINER ERRED IN HOLDING THAT THE PRESENT CLAIMS ARE UNPATENTABLE OVER STODDARD, ET AL., IN VIEW OF COOK, ET AL.

#### (7) Grouping of Claims

The claims at issue stand or fall together.

#### (8) Arguments

#### 35 U.S.C. § 103(a) rejections

Prior to discussing the issues involved in this appeal, the Applicants specifically indicate that they do not waive the issues as raised in the previous Amended Second Supplemental Appeal Brief, should the Examiner raise the rejections again. This brief is provided based on the assertion that the previous several rejections have been withdrawn as stated in the Notification of Non-Compliant Appeal Brief of May 8, 2006.

In the second reopening of the prosecution of December 16, 2004, claims 33-36, 38-46 and 48-52 were rejected under 35 USC §103(a) as being unpatentable over Stoddard, et al., in view of Cook, et al. It should be noted that the 35 USC § 102(b) and recently withdrawn 35 USC § 103 rejections in the previous office actions had been overcome in subsequent amendments and are therefore not addressed in the brief. In the last response filed (March 19, 2003), the applicants argued that the invention requires only a "single display routine" to drive the displays of different types. As argued in the several responses to the office actions, there are three different types of displays, stroke displays, raster displays, and hybrid displays (a combination of stroke and raster displays). Grothe, et al., one of many prior art patents cited in the office actions is a perfect example of the prior art for driving the different display types. Each display type requires a specific input format designed for each display type. Stoddard, et al., describes plural display indicators driven by a single display generator (Col.1, lines 64-66). This display generator is in reference to a single **stroke** graphics generator driving a single display or multiple displays at different drawing rates (emphasis added). "A significant advantage of the FIG. 1 embodiment is that the display indicators D1 and D2 can time share the display generator 13 so as to present common or unique sets of symbols and/or video images on both indicators for simultaneous visual observation." (Col. 4, lines 49-54) Again this is in reference to 2 or more stroke displays and/or 2 or more stroke drawing rates. Stoddard, et al., discloses using only one type of graphics generation - stroke drawn graphics. There is no mention of raster generated graphics and/or using a single display routine to render graphics in either stroke or raster on the same display. The only remotely close inference to other display types is at Col. 4 lines 50-54 that indicates: "Though illustrated with a cursive writing technique, the variable rate character generator technique is equally applicable to raster scan, dot generating and other writing techniques." This passage does not indicate how this can be done, whether other signal generators are necessary nor does it mention a combined stroke/raster format or

using the identical single display routine to generate the same formats in either stroke or raster mode. Cook, et al., suffers from the same deficiencies, each display is subject to its own specific display routine.

The phrase that "Stoddard, et al., teaches driving a plurality of displays of different types associated with a method..." as stated on page 2 of the December 16, 2005 office action is totally unsupported. Prior support cited by the Examiner was to col. 2, lines 42-43 which is in reference to drawing graphics in stroke and does not reference raster generated graphics on the same display.

The Examiner in the final office action indicated that Stoddard, et al., teaches a "single display generator", thus rejecting the independent claim (claim 38) for this set of rejections. The rejection was traversed. The error in the rejection is that a display routine is not the same or even closely related to a display generator. The only common feature between a "single display generator" and a "single display routine" are the words "single" and "display". A "single display routine" is not the same as a "single display generator" in the context of the Stoddard, et al., patent or in any context. As specifically set out in the response to the office action dated February 25, 2003, a "single display generator" provides a common means for rendering display objects while the "single display routine" provides a means for defining the display objects to be rendered. A display generator is the same element as the one or more display interfaces from the output of the video library as set out on page 4, lines 8-13 of the patent application. The feature and operation of the single display routine is set out on page 9, lines 1-12. The single display routine could be used with the single display generator of Stoddard, et al., as well as other display interfaces. Stoddard, et al., discussed a hardware generator while the present patent application teaches a software routine that interfaces with the hardware generator(s). The "single display routine" is a software functional interface that may use one or more "single display generators". The

"single display generator" as defined in the Stoddard, et al., patent is a specific hardware solution for rendering displays while the "single display function" as defined in the present patent application is a software functional interface not limited to any one specific hardware solution. The Examiner's simplistic statement that a "single display generator" is similar to a "single display routine" is totally without merit. If the Examiner's rejections are based on a "single display generator" being an equivalent of a "single display routine", he is, again, in error.

In the advisory action dated July 14, 2003, the Examiner maintained his rejection and stated: "continuation of 5 does NOT place the application in condition for allowance because: Stoddard, et al., teaches driving a plurality of displays of different types with communication busses or data flow path are illustrated as single lines (see column 2, lines 42-43)". Again, this passage and features are totally different than a "single display routine". The only similar word between the cited prior art passage and the claim language in the present patent application is the word "single". A data flow path is a conduit for data. This data can be a multitude of items; however, Stoddard, et al., fails to describe what these items are, let alone specifically defining them as a "single display routine". It is unimaginable how the Examiner made this leap of first indicating that a display generator is described or implied as a single display routine and then the same leap by holding that a single data path is similar or by implication, the same as a single display routine.

It is apparent that Stoddard, et al., does not mention or infer any type of a display routine and specifically does not disclose a single display routine as taught and claimed in the present invention. Therefore, the next analysis requires the applicant to show that the Examiner's conclusion, that a single signal generator or a single data path line is not an equivalent to the claimed feature of a single display routine. Although this appears obvious from the above discussion, the analysis is provided below.

In order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents. In re Ruff, 256 F.2d 590, 118 USPQ 340 (CCPA 1958) (The mere fact that components are claimed as members of a Markush group cannot be relied upon to establish the equivalency of these components. However, an applicant's expressed recognition of an art-recognized or obvious equivalent may be used to refute an argument that such equivalency does not exist.); In re Scott, 323 F.2d 1016, 139 USPQ 297 (CCPA 1963) (Claims were drawn to a hollow fiberglass shaft for archery and a process for the production thereof where the shaft differed from the prior art in the use of a paper tube as the core of the shaft, as compared with the light wood or hardened foamed resin core of the prior art. The Board found the claimed invention would have been obvious, reasoning that the prior art foam core is the functional and mechanical equivalent of the claimed paper core. The court reversed, holding that components which are functionally or mechanically equivalent are not necessarily obvious in view of one another, and in this case, the use of a light wood or hardened foam resin core does not fairly suggest the use of a paper core). In the present patent application, the Applicant did not indicate that the features presented by the Examiner were functional or mechanical equivalents, nor could they, because the hardware features shown by the Examiner are distinctly different from the claimed software feature.

Further in anticipation of the Examiner indicating that the gist of the single display generator or single data path accomplished the same purpose as a single display routine, the following is provided. Distilling an invention down to the "gist" or "thrust" of an invention disregards the requirement of analyzing the subject matter "as a whole."

W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir.

1983), cert. denied, 469 U.S. 851 (1984) (restricting consideration of the claims to a 10% per second rate of stretching of unsintered PTFE and disregarding other limitations resulted in treating claims as though they read differently than allowed); <a href="Bausch & Lomb v. Barnes-Hind/Hydrocurve">Bausch & Lomb v. Barnes-Hind/Hydrocurve</a>, Inc., 796 F.2d 443, 447-49, 230 USPQ 416, 419-20 (Fed. Cir. 1986), cert. denied, 484 U.S. 823 (1987) (District court focused on the "concept of forming ridgeless depressions having smooth rounded edges using a laser beam to vaporize the material," but "disregarded express limitations that the product be an ophthalmic lens formed of a transparent cross-linked polymer and that the laser marks be surrounded by a smooth surface of unsublimated polymer."). See also <a href="Jones v. Hardy">Jones v. Hardy</a>, 727 F.2d 1524, 1530, 220 USPQ 1021, 1026 (Fed. Cir. 1984) ("treating the advantage as the invention disregards statutory requirement that the invention be viewed 'as a whole' "); <a href="Panduit Corp. v. Dennison Mfg. Co.">Panduit Corp. v. Dennison Mfg. Co.</a>, 810 F.2d 1561, 1 USPQ2d 1593 (Fed. Cir.), cert. denied, 481 U.S. 1052 (1987) (district court improperly distilled claims down to a one word solution to a problem). See MPEP 2144.06.

The Cook, et al., reference was raised to provide the deficiency of Stoddard, et al., which fails to teach "a graphics adapter interface (GAI) 700 (fig. 4) linking a specific code 661-683 (linking generated code, fig. 4) from a 3-D GL application (formats 605, fig. 4) to a 3-D application programming interface (API) (620) (graphics library, GL) (fig. 4). The graphics library GL defined a single display routine as claimed." Cook, et al., teaches an apparatus for interfacing between a plurality of application programs and at least one display adapter having functions supporting a display. Cook, et al., does not have anything to do with the use of a "single display routine", nor does it discuss the ability to drive multiple displays of different types. In fact in Cook, et al., it specifically states: "The adapter interface layer includes three sets of codes 710, 720 and 730, each set being written for utilizing a particular display adapter. Each of these sets of code, herein referred to as routines, includes pieces of code, macros, subroutines and/or programs for utilizing the respective display adapters 770, 780, 790." (Column 3,

line 67 through column 4, line 5). This section specifically indicates that a separate display routine is required for each display. It is unfathomable how this prior art patent can be used to reject the Applicants independent claim feature of a "single display routine" for driving a plurality of displays of different types. This feature is specifically claimed in independent claims 33, 38, 43, and 48. Cook, et al., appears to be teaching exactly the opposite operation than the claimed feature of the present patent application at issue, i.e. using a separate display routine for each specific display. Further, Cook, et al., is limited to raster type displays, only. There is no mention or implication of using the device of Cook, et al., to drive stroke displays or hybrid displays as specifically claimed in the independent claims at issue.

The prosecution of the present patent application and the appeal brief is focused on a single feature in the independent claims, a single display routine. The newly cited Cook, et al., reference does not mention or imply a single display routine for any purpose. As extensively discussed in the prior responses to the office actions, the original appeal brief and the first supplemental brief and this brief, none of the cited references individually or in combination discuss, imply or even hint at a single display routine for driving multiple displays of different types.

#### Conclusion

In view of the foregoing, Applicant respectfully requests that the Board of Patent 'Appeals and Interferences overrule the Final Rejection of Claims 33-36, 38-46 and 48-52 over the cited art, and hold that Appellants' Claims are allowable over the references.

# (9) Appendix

As previously indicated, an Appendix containing a copy of the claims involved in this appeal is attached as Appendix A. There is no evidence under 37 CFR 1.130, 1.131 or 1.132 or other evidence entered by the Examiner and relied on by the Appellant in this appeal, so no appendix for evidence is included.

By:

Respectfully submitted,

Dated: June 15, 2006

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#### **APPENDIX A**

# to Appeal Brief of Appellant

## **CLAIMS**

33. (Previously Presented) A computer device for driving multiple displays of different types using formats designed for raster displays, said device comprising:

means for linking generated code from said formats to a standard graphics library;

means for driving a plurality of displays of different types with a single display routine, said plurality of displays comprising stroke displays, raster displays and hybrid displays, wherein said hybrid displays comprise stroke and raster displays, from output of said graphics library; and

means for dynamically switching between said displays in real time.

- 34. (Original) The device of Claim 33, wherein said graphics library comprises an OpenGL graphics library.
- 35. (Previously Presented) The device of Claim 33, wherein said formats comprise generated code formats.
- 36. (Original) The device of Claim 33, wherein said driving means comprise stroke video drivers using occlusion memory.
  - 37. (Canceled)

38. (Previously Presented) A computer device for driving a hybrid stroke/raster display using formats designed for raster displays, said device comprising:

means for linking generated code from said formats to a standard graphics library;

driving said hybrid stroke and raster display with a single display routine; and

means for providing stroke and raster display inputs from output of said graphics library.

- 39. (Original) The device of Claim 38, wherein said graphics library comprises an OpenGL graphics library.
- 40. (Original) The device of Claim 38 further comprising stroke video drivers using occlusion memory.
- 41. (Original) The device of Claim 38 further comprising means for dynamically switching between stroke and raster video drivers in real time.
- 42. (Previously Presented) The device of Claim 38, wherein said formats comprise generated code formats.

43. (Previously Presented) A method for driving multiple displays of different types using formats designed for raster displays, the method comprising the steps of:

linking generated code from the formats to a standard graphics library;

driving a plurality of displays of different types with a single display routine, the plurality of displays comprising stroke displays, raster displays and hybrid displays, wherein the hybrid displays comprise stroke and raster displays, from output of the graphics library; and

dynamically switching between the displays in real time.

- 44. (Original) The method of Claim 43, wherein the linking step comprises linking to an OpenGL graphics library.
- 45. (Previously Presented) The method of Claim 43, wherein the linking step comprises linking generated code.
- 46. (Original) The method of Claim 43, wherein the driving step comprises employing stroke video drivers using occlusion memory rather than raster masking.
  - 47. (Canceled)

48. (Previously Presented) A method for driving a hybrid stroke/raster display using formats designed for raster displays, the method comprising the steps of:

linking generated code from the formats to a standard graphics library;

driving the hybrid stroke and raster display with a single display routine; and

providing stroke and raster display inputs from output of the graphics library.

- 49. (Original) The method of Claim 48, wherein the linking step comprises linking to an OpenGL graphics library.
- 50. (Original) The method of Claim 48 further comprising the step of providing stroke video drivers using occlusion memory.
- 51. (Original) The method of Claim 48 further comprising the step of dynamically switching between stroke and raster video drivers in real time.
- 52. (Previously Presented) The method of Claim 51, wherein the linking step comprises linking generated code.